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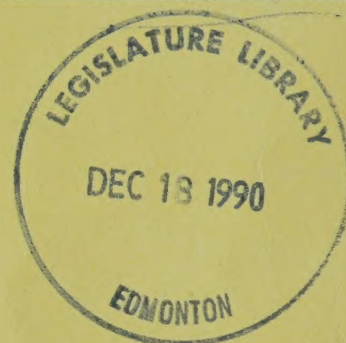


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INDEXES OF LOW INCOME AREAS



CENSUS DIVISION 15



RURAL DEVELOPMENT RESEARCH BRANCH
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INDEX OF LOW INCOME AREAS

of

CENSUS DIVISION 15

by

LEO REGEHR

Published by

RURAL DEVELOPMENT RESEARCH BRANCH

Economics Division

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VICTOR T. JANSSEN

Branch Head

PREFACE

The Peace River area is the third rural development area in the Province of Alberta. The area was selected, at the request of local people, because of the relatively low income levels of the residents of the area and because of the encouraging prospects for further development.

In response to this request the Provincial and Federal governments agreed to jointly finance a program of rural development in the area. The first step is an inventory of the existing resources and situation. Analysis of problems and potentials will be made by the local people in collaboration with rural development specialists. Recommendations for improvement of the situation will follow.

This is one of a series of reference papers prepared as background information for use of study groups and action bodies in the local area. While this information is outdated, it may be an indication of the present relationship between income levels and local areas. As new data becomes available, additional reports will be issued if the figures presented here are misleading.

It is expected that deliberations of the study groups and other local meetings will provide a basis for an Overall Economic and Social Development Plan which may be used as a guide to overcome problems and remove roadblocks to social and economic improvement in the area. Essentially, local people will determine ways to help themselves with the help of government advisors and programs. A sound Development Plan may also provide justification in future for some co-operative government financial aid in activating the program.

Staff members from the Rural Development Research Branch of the Agricultural Economics Division and the Regional Resource Co-ordinator of the Program Development Division will work together with local people in this study and self-help operation.

Dr. Glen R. Purnell, Director
Economics Division
Alberta Department of Agriculture

ACKNOWLEDGEMENTS

I am grateful for the kindly supervision of Mr. V. T. Janssen, Branch Head, in the preparation of this paper. Mr. K. A. Svenson and Mr. J. F. Bigam assisted in the development of the index measures. Total income deviations could not have been completed without Mr. Bigam's special assistance. For editorial assistance, I am grateful to Mrs. Joanne Tuffs and for typing, to Miss Sylvia Smart.

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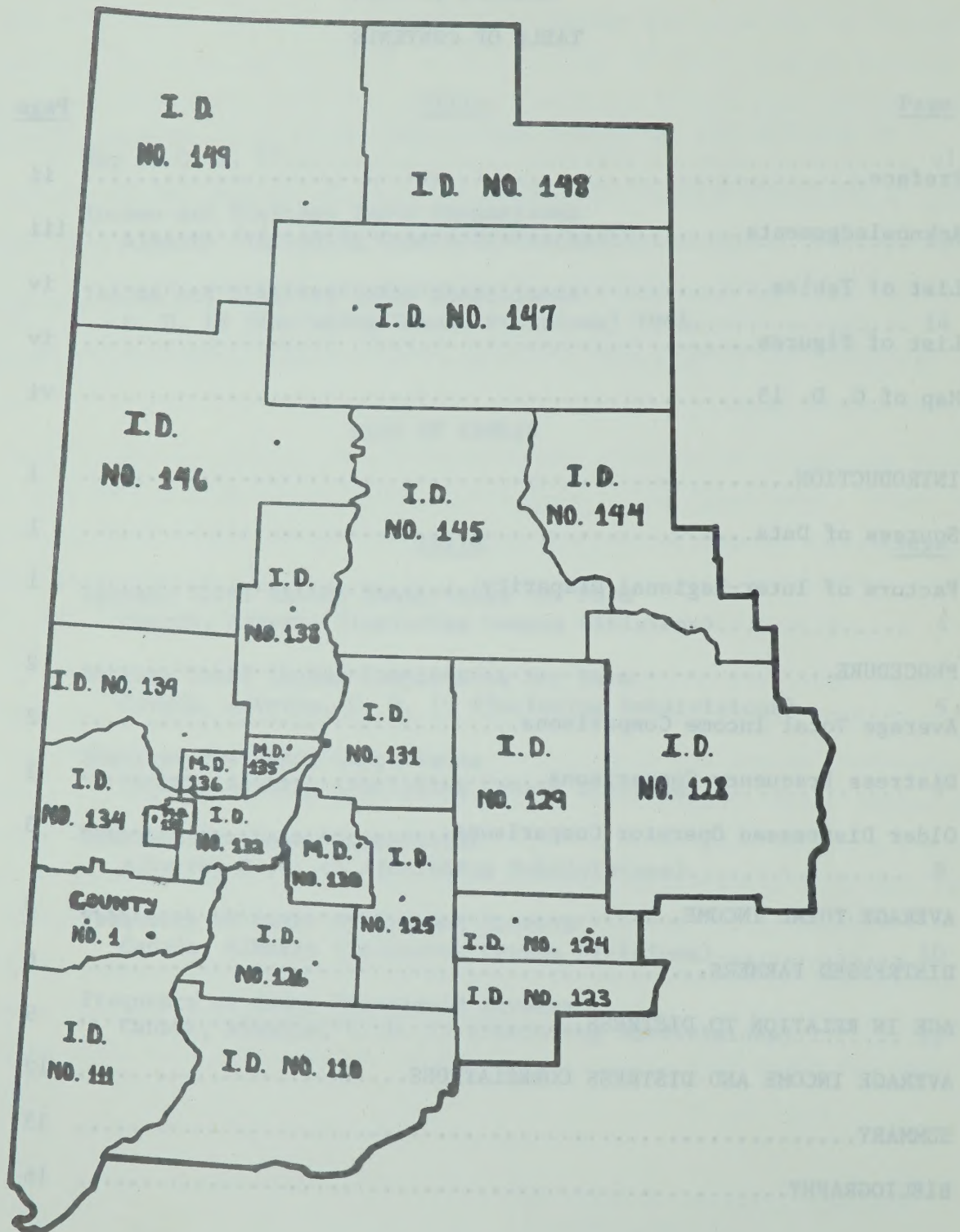
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MAP OF CENSUS DIVISION 15



SHOWING CIVIC DISTRICTS

INTRODUCTION

Methods of determining the relative need of rural areas are required if ARDA funds are to be allocated to their best advantage. This study attempts to develop several indices for comparing the relative welfare of an area, in this case C. D. 15, with any other area in Alberta and with Canada.

SOURCES OF DATA

The Census of Canada (1961) and special ARDA tabulations (1961) were used as sources of information. While actual income and welfare levels have probably improved since 1961 when these data were collected, the relationship between areas probably remained constant.

This study includes all farms with agricultural sales exceeding \$250, except institutional farms such as experimental farms, Indian reserves, community pastures, etc. The total groups of farms under study are the commercial and small scale farms corresponding to "Group 2" in Table 1 of the special ARDA tabulations.

FACTORS OF INTER-REGIONAL DISPARITY

The three factors used to measure the degree of inter-regional disparity are:

1. The average total income per farm, derived from the sale of farm products plus the estimated revenue obtained from off-farm employment.^{1/} Excluded from total income in this study are pensions, family allowances and other transfer payments.
2. The proportion of farm operators who were distressed. They comprised farms with:
 - (a) Gross sale of agricultural products over \$250 but under \$2,500.

^{1/} Income figures will thus correspond to average total income figures in Table 2 of the special ARDA tabulations.

(b) A capital value of less than \$25,000.

(c) Less than one month off-farm employment during the year.^{1/}

3. The proportion of the distressed farm operators who were over 55 years of age.

Educational levels, type of farming, etc., are outside the scope of this report. As this data becomes available, other papers will follow. An up-dated report will follow when 1966 census figures become available.

PROCEDURE

1. Average Total Income Comparisons

The average total income for Canadian farms was found to be \$5,843, and was divided by itself to obtain an index number of 1.00.

The Alberta average was found to be \$6,795 and, when divided by the Canadian average, an index number of 1.16 was obtained.

The average total farm income for C. D. 15 was calculated to be \$3,962. Dividing this figure by the Canadian average gave an index number of .58. Average incomes for each census division of Alberta and for each civic district in C. D. 15 were also calculated and tabulated for comparison.

2. Distress Frequency Comparisons

Alberta's distressed farmers comprise 13.73 per cent of all distressed farmers in Canada, whereas Alberta's share of Canada's total farm population is 15.69 per cent. By dividing 13.73 by 15.69, a distress index of .875 is obtained for Alberta.

^{1/} The number of distressed farmers will therefore correspond to the figures in "Group 6" of Table 1 in the special ARDA tabulations.

Distress indexes for each census division in Alberta and for each civic district of C. D. 15 may be obtained by similar computations. The index numbers are given in Tables 3 and 4, pages 7 and 8.

3. Older Distressed Operator Comparisons

The proportion of Alberta's distressed farmers who live in C. D. 15 is calculated, and then divided by the percentage of all Alberta farms which lie in C. D. 15. This provides a distress index based on Alberta. An index number based on Canada is also calculated.

All census divisions in Alberta and all civic districts in C. D. 15 are described by index numbers in Tables 5 and 6, pages 10 and 11.

AVERAGE TOTAL INCOME

The relative need of an area may be inferred by comparing its average total farm income with that of other areas. These comparisons are made for C. D. 15 and for each civic district within C. D. 15 in Tables 1 and 2, pages 4 and 5.

Table 1 shows that incomes in Census Divisions 10 to 15 inclusive are below both Alberta and Canada average incomes. Average incomes in C. D. 15 are about two-thirds as high as in Canada in general, and just over half as high as the average farm income in Alberta.

Table 2 shows that within C. D. 15, most civic districts have incomes well below the provincial or Canadian averages.

Table 1 AVERAGE TOTAL INCOME COMPARISONS PER FARM
COMMERCIAL AND SMALL SCALE FARMERS
Canada, Alberta (Including Census Divisions) 1961

Area	Comparative Income Index		Average Total Income (Dollars)	Number of Farms
	Alberta	Canada		
Canada		1.00	5,843	436,239
Alberta	1.00	1.16	6,795	68,438
C. D. 14	.44	.52	3,019	774
C. D. 12	.49	.57	3,333	4,075
C. D. 13	.56	.65	3,826	6,680
C. D. 15	.58	.68	3,962	8,073
C. D. 10	.73	.85	4,982	9,800
C. D. 11	.83	.97	5,671	7,719
C. D. 8	.94	1.09	6,375	6,102
C. D. 7	.96	1.12	6,534	5,084
C. D. 4	1.14	1.33	7,759	2,079
C. D. 9	1.15	1.34	7,840	148
C. D. 3	1.53	1.78	10,417	2,505
C. D. 6	1.61	1.87	10,937	4,531
C. D. 1	1.69	1.97	11,505	2,109
C. D. 5	1.74	2.02	11,807	4,228
C. D. 2	1.94	2.25	13,164	4,531

Note: Average total incomes are derived from Table 2, Special ARDA tabulations, which includes residential farmers. To exclude the residential farmers, their agricultural sales and off-farm work was estimated using Census of Canada figures in Agriculture and ARDA estimates of wage rates.

Source: (1), (2)

Table 2 AVERAGE TOTAL INCOME COMPARISONS PER FARM
COMMERCIAL AND SMALL SCALE FARMERS
Canada, Alberta, C. D. 15 - 1961

Area	Average Total Operator Income				Number of Farms
	In Dollars	Comparative Income Index			
		C. D. 15	Alberta	Canada	
Canada	5,843			1.00	436,239
Alberta	6,795		1.00	1.16	68,438
C. D. 15	3,962	1.00	.58	.68	8,073
Indian Reserves	2,022	.51	.30	.35	27
I. D. 110	2,044	.52	.30	.35	10
I. D. 147	2,148	.54	.32	.37	226
I. D. 129	2,768	.70	.41	.47	5
I. D. 146	2,858	.72	.42	.49	58
I. D. 111	2,987	.75	.44	.51	40
I. D. 126	3,208	.81	.47	.55	362
I. D. 134	3,276	.83	.48	.56	661
I. D. 139	3,297	.83	.49	.56	664
I. D. 138	3,513	.89	.52	.60	762
I. D. 132	3,564	.90	.52	.61	608
I. D. 125	3,614	.91	.53	.62	424
I. D. 131	3,616	.91	.53	.62	398
M. D. 133	4,027	1.02	.59	.69	295
M. D. 130	4,444	1.12	.65	.76	822
M. D. 135	4,487	1.13	.66	.77	330
I. D. 145	4,517	1.14	.66	.77	7
County #1	4,665	1.18	.69	.80	1,820
M. D. 136	4,992	1.26	.73	.85	376
I. D. 124	5,261	1.33	.77	.90	178

Note: Operator income includes only the value of agricultural sales plus off-farm income.

Source: (1), (2)

The incomes of Indians appear to be the lowest, followed by I. D.'s 110, 147, 129, 146, and 111. These areas are predominately in the green zone and presently not intended for farming. Farmers in the Fort Vermilion region, I. D. 147, appear to have the lowest incomes of areas open to settlement. All of these civic districts have total operator incomes below \$3,000.

The Lesser Slave Lake region, I. D. 124, has the highest average operator income, reflecting the presence of 97 mink farmers. This was followed closely by M. D. 136 (Fairview) and County No. 1 (Grande Prairie). All have average operator incomes in excess of \$4,600, yet are below the Alberta average of \$6,795.

DISTRESSED FARMERS

Low farm operator income alone does not necessarily indicate that the farmer has financial difficulties as he might work off the farm for a considerable period of time. Also, the sale of farm products of some operators may be unduly low because of adverse climatic conditions even though the total capital value of the enterprise is substantial. Accordingly, an attempt is made to identify "distressed farmers". These farmers have sales of agricultural products of less than \$2,500, but more than \$250, a total capital value of less than \$25,000 and less than one month of off-farm employment.

The Alberta census divisions are also compared, indicating that the north is generally more distressed than the southern part of the province. Census Division 15 ranks fourth in the number of distressed farmers it contains in proportion to its total farm population (see Table 3, Page 7).

Table 3
DISTRESS FREQUENCY COMPARISONS
COMMERCIAL AND SMALL SCALE FARMERS
Canada, Alberta, (Including Census Divisions) 1961

Area	Comparative Income Index		Number of Farms	
	Alberta	Canada	Distressed Farms	All Farms
Canada		1.00	95,410	436,225
Alberta	1.00	.88*	13,103	68,438
C. D. 14	1.93	1.69	285	774
C. D. 12	1.85	1.62	1,444	4,075
C. D. 13	1.53	1.34	1,956	6,680
C. D. 15	1.42	1.24	2,187	8,073
C. D. 10	1.25	1.09	2,344	9,800
C. D. 9	1.23	1.08	35	148
C. D. 11	1.04	.91	1,531	7,719
C. D. 8	.98	.86	1,146	6,102
C. D. 7	.75	.66	732	5,084
C. D. 4	.58	.51	231	2,079
C. D. 6	.46	.40	401	4,531
C. D. 3	.45	.39	214	2,505
C. D. 5	.31	.27	248	4,228
C. D. 2	.29	.25	247	4,531
C. D. 1	.25	.22	102	2,109

* .875

Source: (1), (2)

Table 4

DISTRESS FREQUENCY COMPARISONS
COMMERCIAL AND SMALL SCALE FARMS
Alberta, C. D. 15, 1961

Area	Per Cent of All Farms in Alberta (Rounded)	Per Cent of All Distressed Farms Alberta	Comparative Distress Index	
			Alberta	Canada
Alberta	100.000	100.000	1.00	.88*
C. D. 15	11.790	16.690	1.42	1.24
I. D. 147	.330	1.070	3.24	2.84
I. D. 129	.007	.015	2.14	1.87
I. D. 110	.015	.023	1.53	1.34
I. D. 139	.970	1.710	1.76	1.54
I. D. 146	.080	.140	1.75	1.53
I. D. 132	.890	1.500	1.69	1.48
I. D. 125	.620	1.050	1.69	1.48
I. D. 134	.966	1.600	1.66	1.45
I. D. 138	1.110	1.770	1.59	1.39
I. D. 131	.580	.870	1.50	1.31
M. D. 133	.430	.630	1.47	1.29
I. D. 126	.530	.660	1.25	1.09
M. D. 135	.480	.590	1.23	1.08
M. D. 130	1.200	1.430	1.19	1.04
I. D. 111	.060	.069	1.15	1.01
I. D. 124	.260	.280	1.08	.95
County #1	2.660	2.800	1.05	.92
Indian Reserves	.040	.038	.95	.83
M. D. 136	.550	.450	.82	.72
I. D. 145	.010	.008	.80	.70

* Index numbers based on Canada are obtained by multiplying the Alberta index number by .875.

Source: (1), (2)

AGE IN RELATION TO DISTRESS

The age of farm operators is an important factor when considering types of assistance programs. An elderly operator would probably require a different type of program than one who is twenty or thirty years old. Consequently, the ages of distressed farmers considered in the previous section was arbitrarily segregated at 55 years. The proportion of older distressed farmers is compared for Alberta and Canada in Table 5, Page 10.

Table 5 shows that Alberta has proportionately fewer farmers who are both economically distressed and over 55 years of age than does Canada. However, the proportions of older distressed farmers vary considerably from one census division to another. C. D. 15 ranks fifth among census divisions in its proportion of distressed farmers who are over 55 years of age.

Within the province, the relationship between age and the number of distressed farmers is similar to the average incomes of operators in the census divisions. Again, the northern areas have a higher index of older distressed farm operators than the southern part of the province.

Table 5 FREQUENCY OF OLDER DISTRESSED FARMERS
 COMMERCIAL AND SMALL SCALE FARMS
 Canada, Alberta, (Including Census Divisions), 1961

Area	Frequency Index		Number of Older Distressed Farmers
	Alberta	Canada	
Canada		1.00	46,207
Alberta	1.00	.81*	5,867
C. D. 14	2.40	1.94	156
C. D. 13	1.59	1.29	910
C. D. 12	1.50	1.21	524
C. D. 15	1.40	1.13	968
C. D. 4	1.23	1.00	220
C. D. 9	1.18	.95	15
C. D. 11	1.14	.92	753
C. D. 10	1.09	.88	914
C. D. 8	1.01	.82	527
C. D. 7	.80	.65	350
C. D. 3	.50	.40	107
C. D. 2	.37	.30	142
C. D. 6	.35	.28	136
C. D. 5	.29	.23	104
C. D. 1	.23	.19	41

* .809

Source: (1), (2)

Table 6
 FREQUENCY OF OLDER DISTRESSED FARMERS
 COMMERCIAL AND SMALL SCALE FARMS
 Canada, Alberta, C. D. 15, 1961

Area	Frequency Index		No. of Distressed Farmers	
	Alberta	Canada	Over 55	Total
Canada		1.00	46,207	95,410
Alberta	1.00	.81*	5,867	13,103
C. D. 15	1.40	1.13	968	2,187
I. D. 110	3.00	2.43	2	3
I. D. 125	1.87	1.51	68	137
I. D. 138	1.69	1.37	110	232
I. D. 139	1.69	1.37	96	224
M. D. 135	1.67	1.35	47	77
I. D. 126	1.55	1.25	48	86
I. D. 111	1.50	1.21	5	9
I. D. 131	1.47	1.19	50	114
I. D. 132	1.47	1.19	77	196
I. D. 133	1.42	1.15	36	82
I. D. 134	1.40	1.13	80	210
I. D. 147	1.30	1.05	25	140
I. D. 146	1.25	1.01	6	18
Indian Reserves	1.25	1.01	3	5
County #1	1.22	.99	190	367
I. D. 124	1.12	.91	17	37
M. D. 130	1.07	.87	75	188
I. D. 136	1.02	.83	33	59
I. D. 129	----	----	----	----
M. D. 145	----	----	----	----

* .809

Source: (1), (2)

There does not appear to be a pattern within C. D. 15 similar to Alberta, where lower incomes are associated with higher frequencies of elderly distressed farmers. An examination of Table 6 reveals that only 18 per cent of the distressed farmers in the Fort Vermilion area are over 55 years of age, whereas, in the County of Grande Prairie, over 50 per cent of distressed farmers are over age 55. This break from provincial trends is probably associated with the age of settlement.

AVERAGE INCOME AND DISTRESS CORRELATIONS

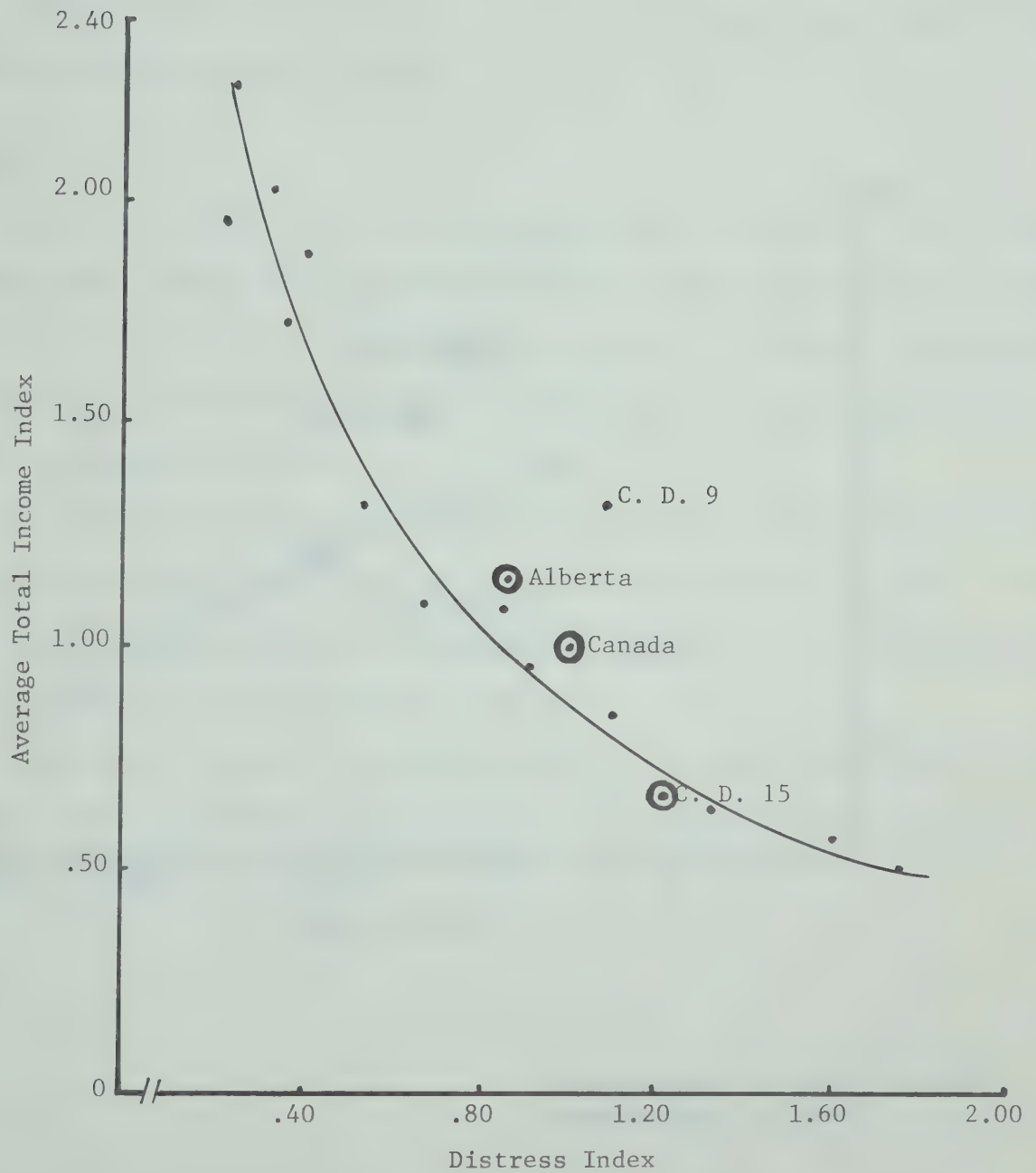
If incomes are evenly distributed, a known change in average income would result in a predictable change in the number of farmers who are economically distressed. To discover the effect that the average income of an area has upon the number of farmers who are distressed, the comparative distress and income indexes are plotted in Figures 2 and 3, Pages 13 and 14.

Figure 2 compares income and distress indexes for Alberta and all census divisions in Alberta. All comparisons are made against the Canadian averages. In this comparison, C. D. 9 stands apart from the relatively close grouping of the remaining 14 census divisions. This variation could be explained by the hypothesis that in C. D. 9 a few farmers are very well off, although many farmers are distressed.

An explanation is again needed when the comparative income and distress indexes are plotted for all civic districts of C. D. 15 in Figure 3. The scattered positions of four civic districts suggests that incomes are rather evenly distributed within these four areas.

Figure 2

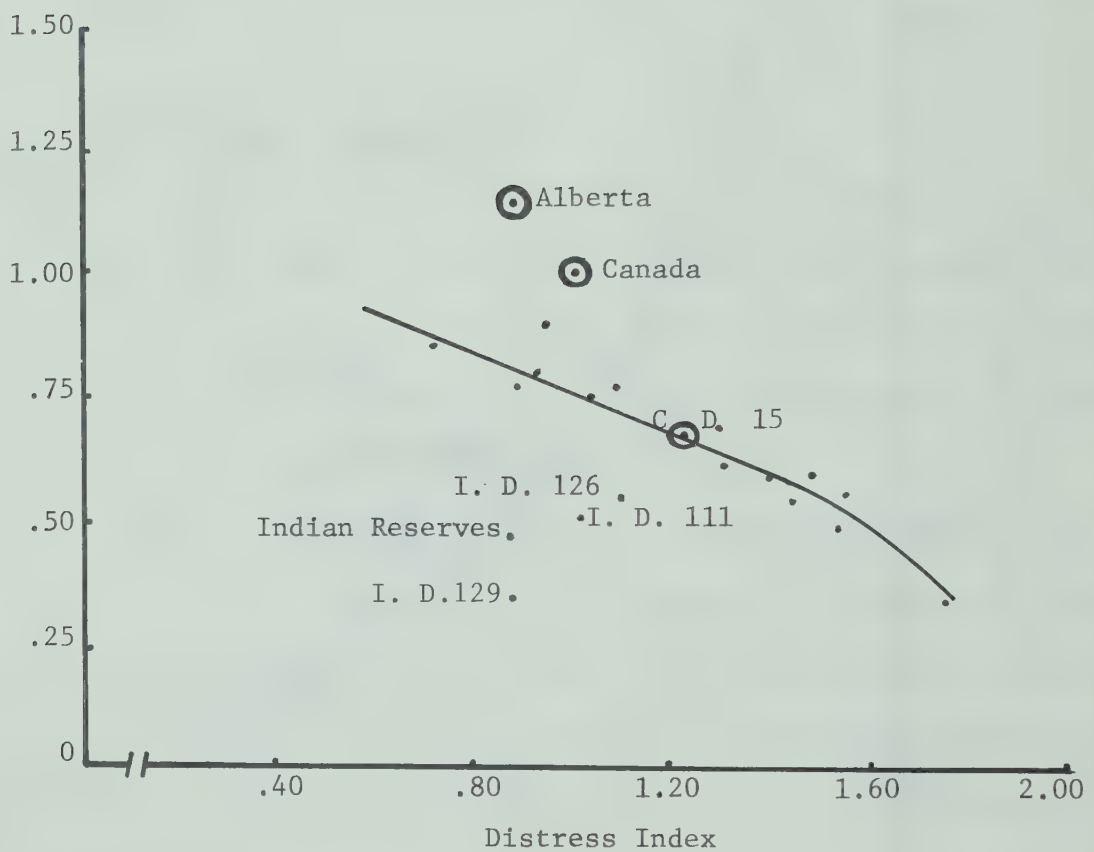
INCOME AND DISTRESS INDEX COMPARISONS
Alberta (Including Census Divisions), 1961



Source: Table 2, Canada Index
Table 5, Canada Index

Note: Canada = 1.00.

Figure 3 INCOME AND DISTRESS INDEX COMPARISONS
C. D. 15 (Including Subdivisions), 1961



Source: Table 3, Canada Index
Table 6, Canada Index

Note: Canada = 1.00.

Within C. D. 15, the proportion of distressed farmers is fairly closely related to total operator incomes. M. D. 136 continues to rank in the well-to-do category, being the only civic district in the Peace River area with less distress than the provincial average.

SUMMARY

Average total farm income per operator is higher in Alberta than in Canada. However, within census divisions in Alberta, total operator incomes vary greatly with higher incomes in the south and lower incomes in the north. Census Division 15, which is the Peace River region, has total operator incomes below both the Alberta and Canadian average.

The proportion of "distressed" operators follows a similar trend, with the frequency of distress being lower in the south and higher in the north. Within C. D. 15, the highest distress frequencies are observed in the fringe areas and in the vicinity of Fort Vermilion.

Generally, in Alberta, the proportion of older farmers within the distress category varies approximately with the age of settlement. This appears to be the case within C. D. 15 as well.

BIBLIOGRAPHY

1. Census of Canada Agriculture , Bulletin 3.9-1.
2. Special ARDA Tabulations, Table I and Table II.

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